Repairing Side-by-side Refrigerator Diffuser

Sometimes the little diffuser door between the freezer and fridge breaks, especially on Kenmore/Whirlpool fridges. With a toothpick and super glue, you can get it back in service.

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INTRODUCTION

You may find that your fridge isn't getting cold, but the freezer is just fine. If the inside fan is running, you should feel cold air blowing in through the diffuser in the top left corner of the fridge. If not, either your defroster is broken and ice has built up, or the diffuser is broken.

On ours, the diffuser door motor pushes on a small, fragile tab on the diffuser door. The tab snapped off. Rather than purchase a new $80 assembly, I fixed it with a toothpick and super glue. This fix may or may not last forever, (worked for about 3 years), but even if you want to replace the diffuser, it'll help you keep your cool until the replacement comes.

TOOLS:

- cooler (1)
- Flashlight (1)
- Small Phillips Head Screwdriver (1)
- 1/4" Nut Driver (1)
- Large Needle Nose Pliers (1)
- iFixit Tech Knife (1)

PARTS:

- flat toothpick (1)
- Super Glue (1)

Step 1 — Repairing Side-by-side Refrigerator Diffuser

- Unload the top three shelves of the fridge, and top two shelves of the freezer into cooler(s).
- Mark the location of the shelves with a bit of tape. Then remove the shelves by tipping up the front edge, then lifting and pulling them towards you.

Step 2



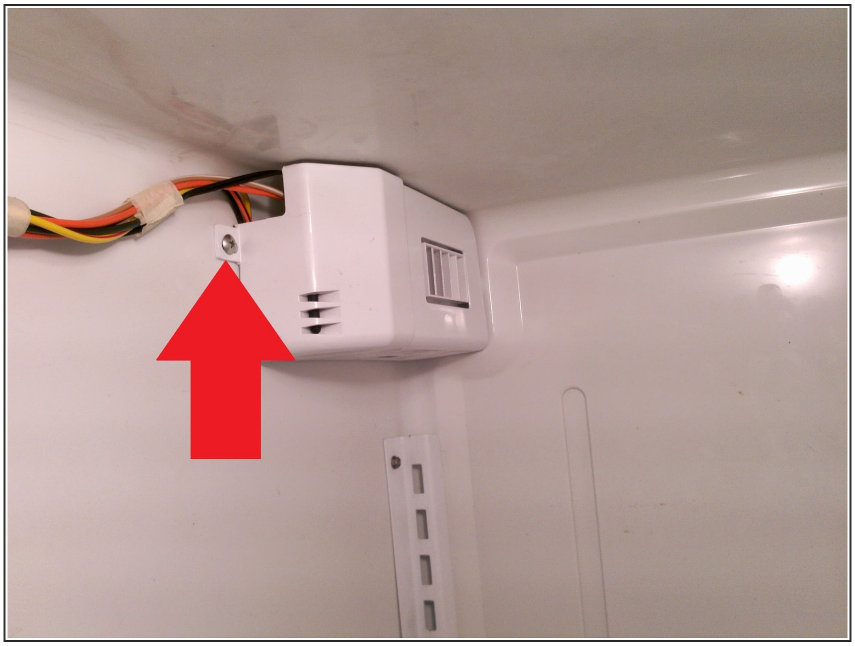
- Turn off the fridge (on ours the switch is in the top left corner of the fridge.) Then unplug it or turn off the breaker.

Step 3



- Remove the wire cover in the top left edge of the fridge. It's held in place by one Phillips head screw.

Step 4

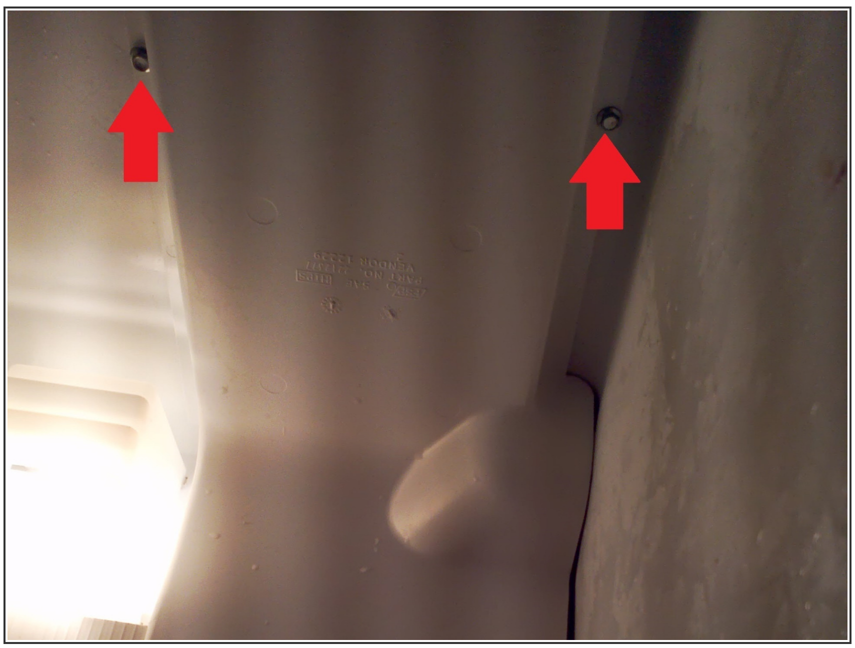


- Unscrew the screw at the front of the diffuser cover. The diffuser itself will still be snugly in place.

Step 5

- Unclip the wire connector from the bottom of the diffuser. Remove the piece of tape holding the wires to the diffuser. We'll remove the other wire connector from the front of the diffuser later.

Step 6

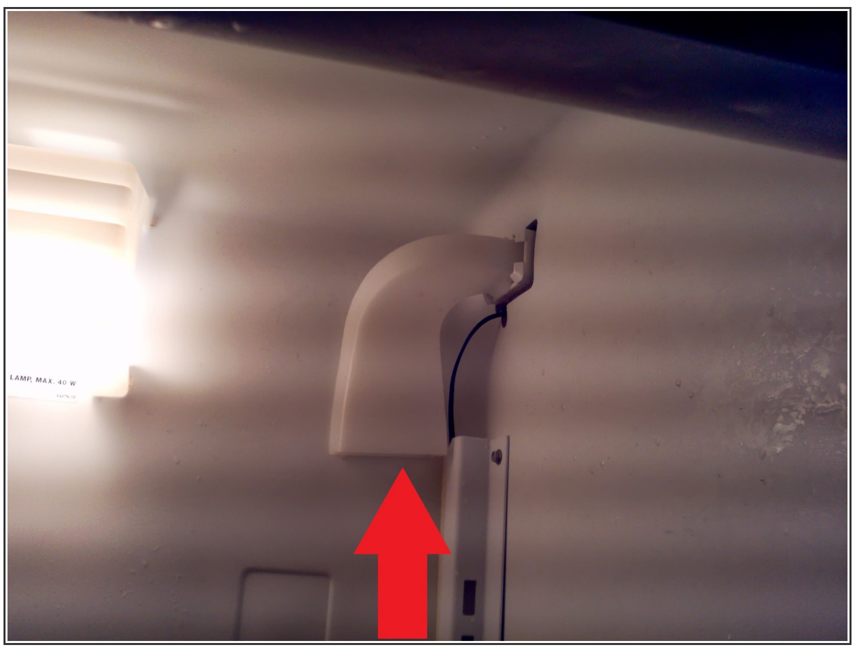


- Close the fridge door and open the freezer door. There's an air chute in the top of the freezer that will be coming out, along with the rear air chute. Remove the pair of screws on the top chute using the 1/4" hex socket. The back chute will still be holding the top chute in place.
- If you're assisting, you may notice the ice dispenser is right next to the back of the person leaning into the fridge. Unless it's a very hot day, try not to slip ice cubes down the shirt/shorts of your cohort.

Step 7

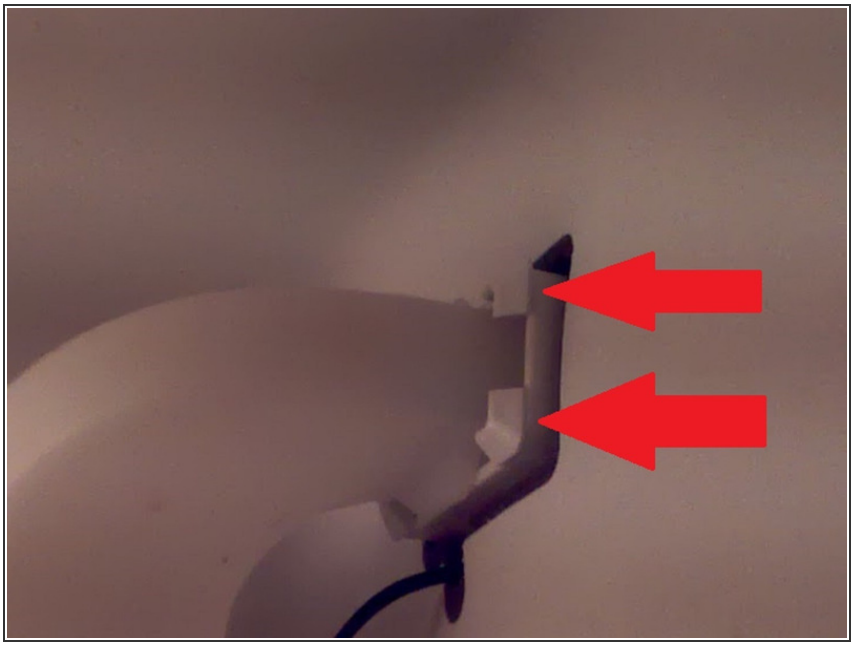
- Take a look at how the back chute and top chute fit together. The back chute, at least on ours, is mounted on hidden spring clips. Pull the bottom edge of the back chute forward. As the top of the back chute comes out, the top chute will fall out too. Don't let it hit the floor.

Step 8



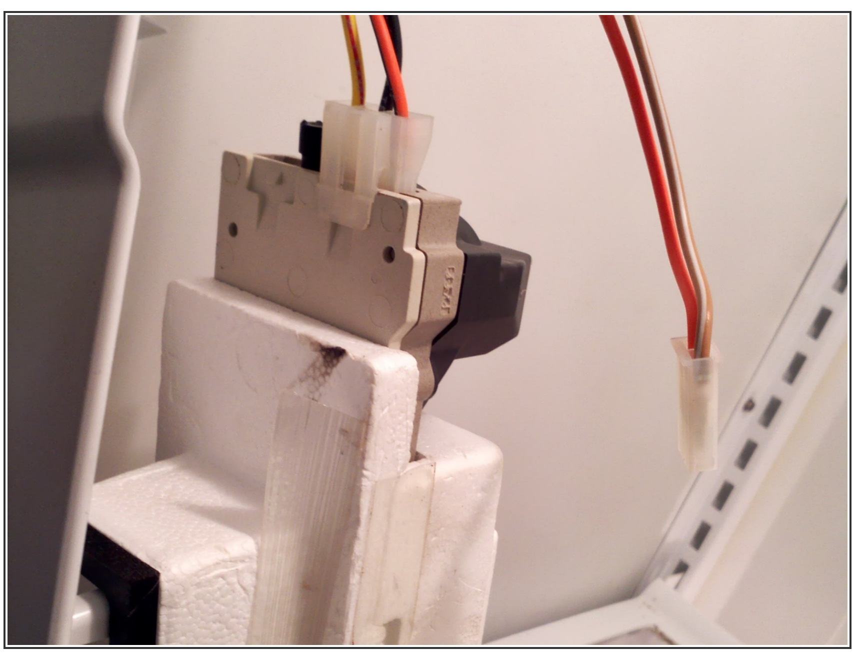
- Now you can see a right angle air duct from the fridge side. This simply pulls out to the left.

Step 9



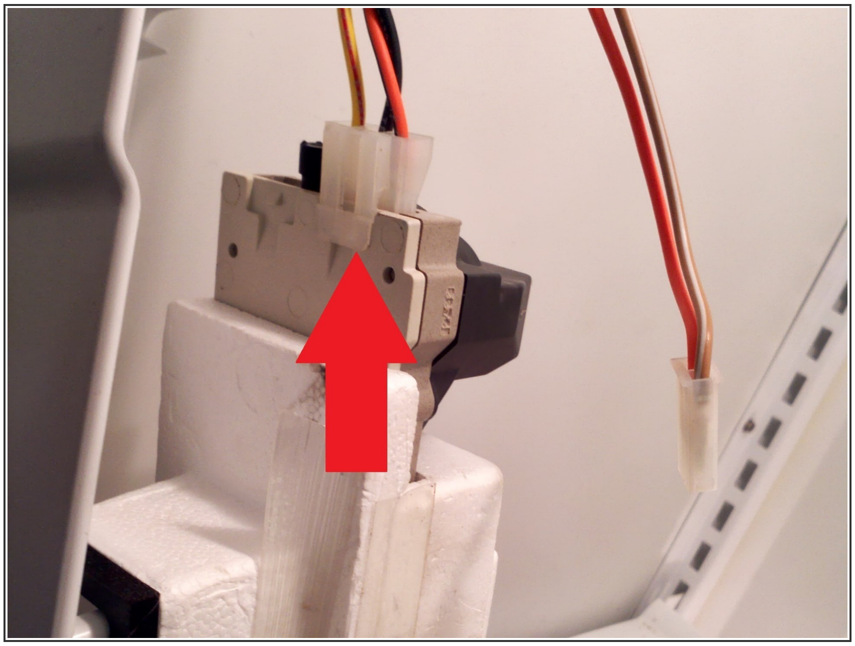
- There is a spring clip in each corner of the fridge duct. Gently push them towards the center of the opening, and then towards the fridge.
- There are 4 clips but only 2 are shown in the picture. (I forgot to take a picture after removing the right angle duct, so just imagine it's gone and you can see the other two as well. Please take a picture and update this page.)
- Close the freezer door and head to the fridge side. But first, if your helper dropped ice down the back of your shorts in the prior step, feel free to return the favor.

Step 10



- Welcome back to the fridge side. Seems roomy now that you've been crowded into the freezer, doesn't it? The diffuser module should slide out freely. We'll remove the wires in the next step.

Step 11



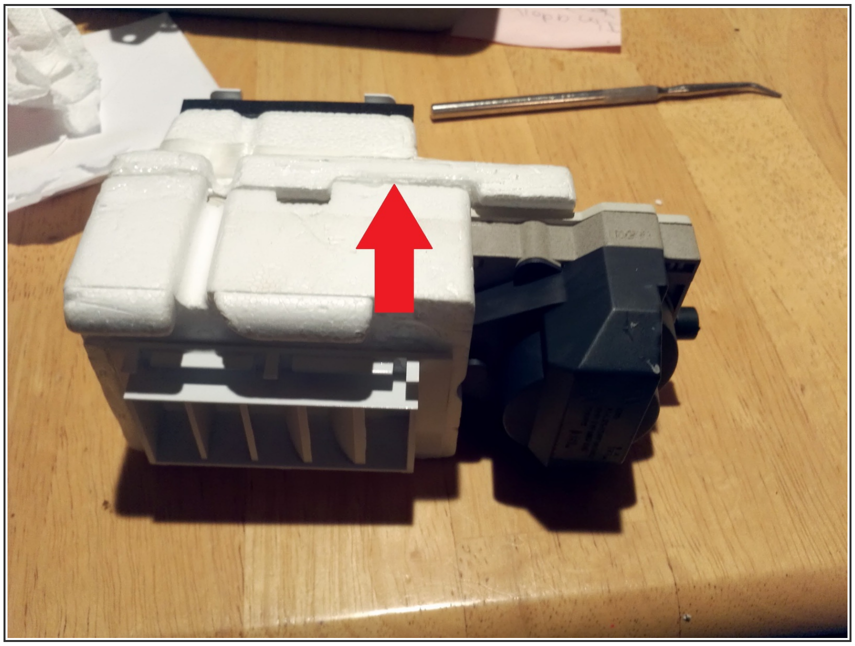
- On the side of the diffuser that was against the wall, you'll see a little clip holding the wire connector in place. Gently pry on that and remove the connector.

Step 12



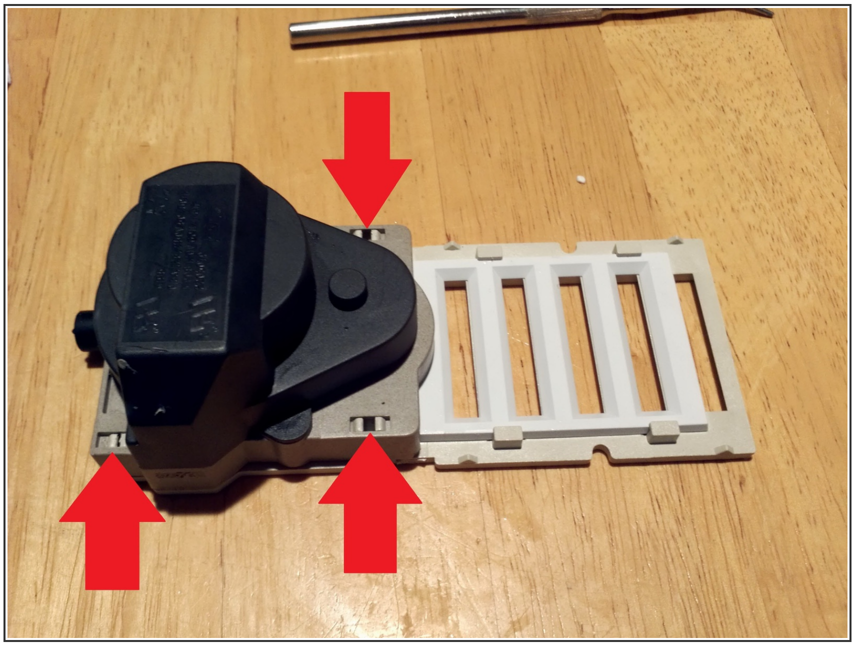
- Now you can carry the little troublemaker over to better light. You might be able to reach in with your little finger and wiggle the diffuser door. If it slides open and closed freely, the door's tab has broken. If not, it's also possible the motor is kaput. (Someone please contribute diagnostics for that)

Step 13



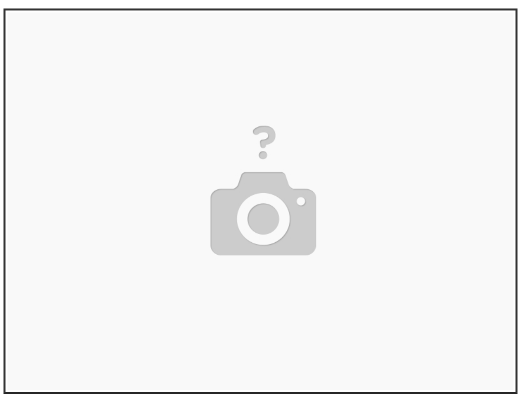
- The diffuser assembly is a "nonserviceable" part. Unless you're stubborn like me. Gently cut open the foam along the glue line all the way around with a box cutter or sharp knife. Now remove the top half of the foam.

Step 14



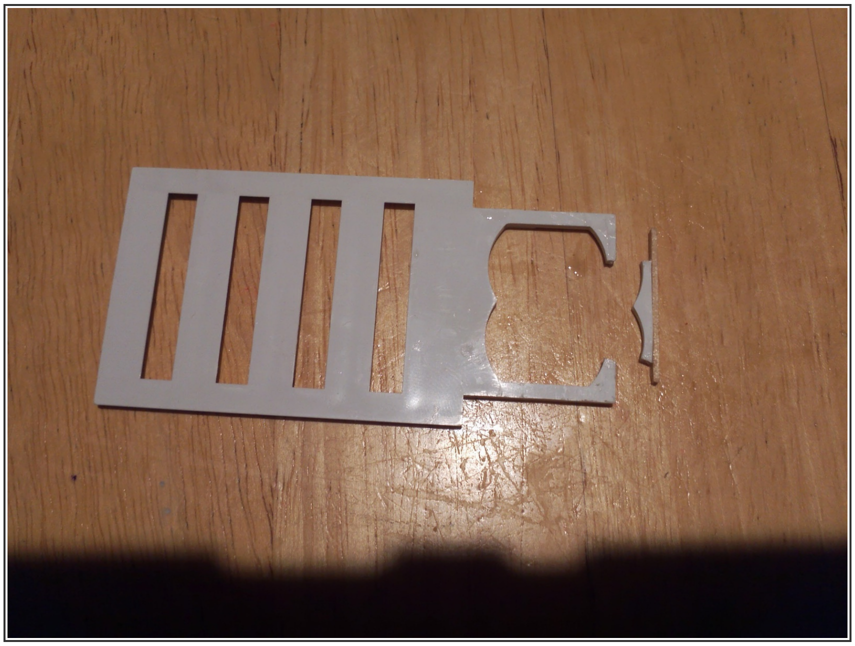
- Now remove diffuser cover. It's held in place by 4 pairs of tabs. Squeeze each pair of tabs with needle nose pliers and gently lift that corner. After all the tabs release, you can lift off the cover. Don't tip the base or the door will fall out.
- I only marked three tabs in the photo. If you can't find the fourth tab, then I know what you did with the beer that didn't fit in the cooler in step one!

Step 15



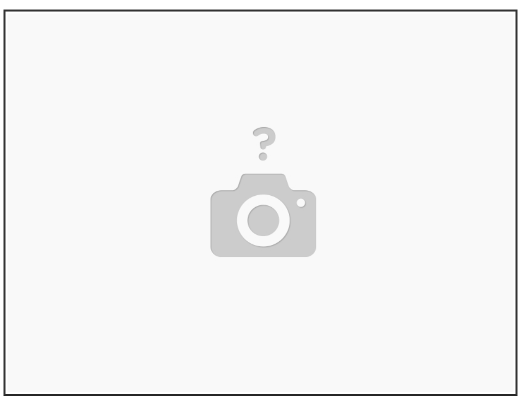
- Note which side of the door is up. You can now slide out the door, and find the plastic tab that broke off.

Step 16



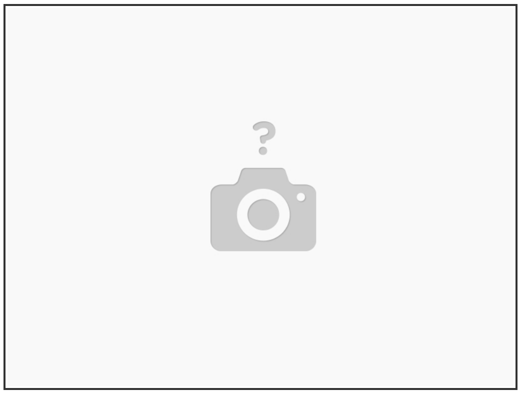
- Examine the door to see where you can reinforce it without interfering with the cam or making the door thicker. Glue the plastic tab back in place, using a piece of flat toothpick or scrap of plastic to reinforce it. Use super glue or epoxy. Do not use heat to set the epoxy - this plastic softens very easily.
- In the picture, you can see the broken tab, and the bit of toothpick next to it.

Step 17



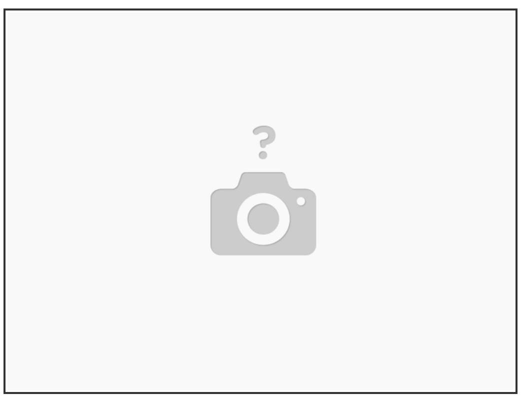
- Reassemble the diffuser, making sure the cam sits properly in the hole of the diffuser door. If you have troubles snapping it together, recheck the door's position.

Step 18



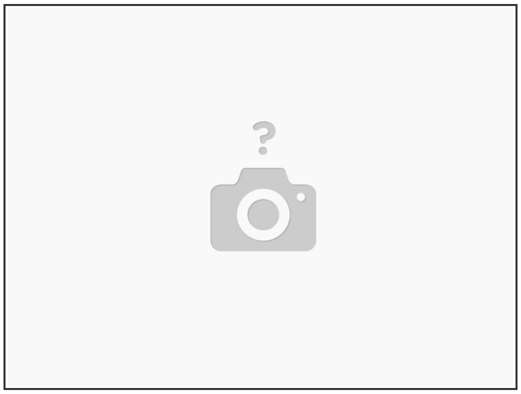
- Clamp the foam part of the assembly back around the plastic. Tape it along the seam. I used fiber tape, but packing tape or electrical tape might work.

Step 19



- Now reassemble everything:
- "Second verse, same as the first. A little bit louder, just in reverse."
- Be sure to turn the fridge back on, plug it in, flip on the circuit breaker, etc.

Step 20



- Finish the melting ice cream.

To reassemble your device, follow these instructions in reverse order.

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